UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/503,608	02/11/2000	Kira Sterling Attwood	RSW00-0010	6907

25259   7590   04/22/2004

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EXAMINER
TRAN, ELLEN C

ART UNIT	PAPER NUMBER
2134	

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _12 February 2004_.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-14_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☐ Claim(s) _____ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) NORMAN M. WRIGHT
    Paper No(s)/Mail Date. _____ PRIMARY EXAMINER
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

1. This action is responsive to communication: amendment filed on 12 February 2004.

2. Claims 1-14 are currently pending in this application. Claims 1, 3, 5, and 7 are independent claims.

Response to Arguments

3. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

4. The applicant amended the claims; therefore the previous rejection is not applicable the following rejection applies.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 1-10 and 12-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wesinger, Jr. et al. U.S. Patent No. 6,052,788 (hereinafter '788) in further view of Reid et al. U.S. Patent No. 6,182,226 (hereinafter '226).

As to dependent claim 1, "in which a large number of connectionless datagrams are received for queuing to a port on the network server, comprising:"

is taught in '788 col. 3, lines 55-64 "Both connection-oriented (e.g., TCP) and connectionless (e.g., UDP-based) services may be handled using envoys";

"determining, in response to the arrival of a connectionles datagram from a host for a port on the network server, it the number of connectionless; datagrams already queued to the port from the host exceeds a prescribed threshold" is shown in '788 col. 14, lines 22-31 "The firewall is capable of servicing many simultaneous connection. The number of allowable simultaneous connections is configurable and may be limited to a predetermined number, or may be limited not by number but only by the load currently experienced by the physical machine";

"discarding the datagram, if the number of connectionless datagrams already queued to the port from the host exceeds the prescribed threshold; and" is disclosed in '788 col. 14, lines 36-37 "the firewall selectively allows and denies connections to implement a network security policy";

"queuing the connectionless datagmm to a queue slot of the port, if the number of connectionless. datagrams already queued to the port from the host does not exceed the prescribed threshold" is taught in '788 col. 7, lines 1-4 "connection, once established is fully bi-directional, with the same virtual host passing data between the originating network connection and the network connection at the opposite edge of the firewall";

the following is not taught in '788:

"A method of preventing a flooding attack on a network server" however
'226 teaches "In addition to the firewall's secured type enforced operating system and
application gateway architecture, the system has been designed to defend against
known network penetration and denial of service attacks, including: SYN Flood attack"
in col. 4, lines 12-20.

It would have been obvious to one of ordinary skill in the art at the time of the
invention to modify a firewall providing enhanced network security taught in '788 to
include a means to protect against flooding attacks. One of ordinary skill in the art
would have been motivated to perform such a modification to increase a networks
security when utilizing the Internet see '226 (col. 1, lines 12 et seq.) "Recent
developments in technology have made access easier to publicly available computer
networks, such as the Internet. Organizations are increasingly turning to external
networks such as the Internet to foster communications between employees, suppliers
and clients. With this increased access comes an increased vulnerability to malicious
activities on the part of both people inside and outside the organization. Firewalls have
become a key tool in controlling the flow of data between internal networks and these
external networks ".

**As to dependent claim 2, "wherein the determining if the number of
datagrams already queued to the port from the host exceeds a prescribed
threshold further comprises: calculating the prescribed threshold by multiplying
a percentage P by the number of available queue slots for the port"** is taught in
'788 col. 14, lines 22-31 "The firewall is capable of servicing many simultaneous

connection. The number of allowable simultaneous connections is configurable and

may be limited to a predetermined number, or may be limited not by number but only by

the load currently experienced by the physical machine" (i.e. "multiplying a percentage

P by the number" same as "determining load capacity").

As to independent claim 3, this claim is directed to the apparatus of the method

of claim 1 and is similarly rejected along the same rationale

As to dependent claim 4, this claim incorporate substantially similar subject

matter as in cited in claim 2 above and is rejected along the same rationale.

As to independent claim 5, this claim is directed to a storage media containing

program code of the method of claim 1 and is similarly rejected along the same

rationale.

As to dependent claim 6, this claim incorporate substantially similar subject

matter as in cited in claim 2 above and is rejected along the same rationale.

As to independent claim 7, this claim is directed to a carrier wave containing

program code of the method of claim 1 and is similarly rejected along the same

rationale.

As to dependent claim 8, this claim incorporate substantially similar subject

matter as in cited in claim 2 above and is rejected along the same rationale.

As to dependent claim 9, "further comprising: configuring a maximum

number of connectionless, datagrams allowed to be queued at the port" is taught

in '788 col. 14, lines 22-31 "The firewall is capable of servicing many simultaneous

connection. The number of allowable simultaneous connections is configurable and

may be limited to a predetermined number, or may be limited not by number but only by the load currently experienced by the physical machine".

As to dependent claim 10, "wherein the configuring step further includes configuring a controlling percentage of available queue slots remaining for the port; and wherein the proscribed threshold is based on the controlling percentage of available queue slots remaining for the port" is shown in '788 col. 14, lines 22-31 "The firewall is capable of servicing many simultaneous connection. The number of allowable simultaneous connections is configurable and may be limited to a predetermined number, or may be limited not by number but only by the load currently experienced by the physical machine".

As to dependent claim 12, this claim incorporate substantially similar subject matter as in cited in claim 9 above and is rejected along the same rationale.

As to dependent claim 13, this claim incorporate substantially similar subject matter as in cited in claim 10 above and is rejected along the same rationale.

As to dependent claim 14, "wherein the computer is the network server" is taught in '226 col. 3 lines 1-8 "Workstations 40 communicate through firewall 34 with servers or workstations on external network 36 and with server 42 on network 44".

7.   **Claims 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over '788 in further view of '226, in further view of Bechtolsheim et al U.S. Patent No. 6,515,963 (hereinafter '963).

As to dependent claim 11, the following is not taught in the combination of teachings of '788 and '226:

"**wherein the port comprises a plurality of queue slots**" however '963

teaches "Of course, all routers and switches must also transmit the data they receive.

Referring to FIG. 1, data is read out from the queue or queues 40 assigned to each

output port 70 in a manner well-known in the art" in col. 11, lines 26-30;

"**the method further comprising: maintaining a number of available queue**

slots of the plurality of queue slots for the port" however '963 teaches "In addition,

a reserve of output queue space is also maintained for each precedence level" in col.

13, lines 52-54.

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify a firewall providing enhanced network security to protect against

flooding attacks taught in the combination of teaching '788 and '226 to include a means

to maintain queue slots available in a port. One of ordinary skill in the art would have

been motivated to perform such a modification to compensate for the different types of

internetworking traffic see '963 (col. 1, lines 33 et seq.) "A particular problem in

internetworking traffic regulation arises for the variety of traffic sources or flows

presented to the router/switching device ... Buffer manager 25 and port scheduler 50

are also implemented".

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy

as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final

action is set to expire THREE MONTHS from the mailing date of this action. In the

event a first reply is filed within TWO MONTHS of the mailing date of this final action
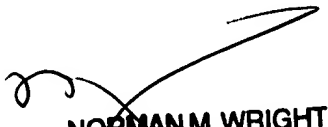
and the advisory action is not mailed until after the end of the THREE-MONTH

shortened statutory period, then the shortened statutory period will expire on the date

the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

calculated from the mailing date of the advisory action. In no event, however, will the

statutory period for reply expire later than SIX MONTHS from the mailing date of this

final action.

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ellen C Tran whose telephone number is (703) 305-

8917. The examiner can normally be reached on 6:30 am to 3:30 pm Monday -

Thursday and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Gregory A Morse can be reached on (703) 308-4789. The fax phone

number for the organization where this application or proceeding is assigned is (703)

872-9306.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703) 305-

3900.

Ellen. Tran
Patent Examiner
Technology Center 2134
April 7, 2004

NORMAN M. WRIGHT
PRIMARY EXAMINER